APPENDIX B: Amendments to Claims

Please delete without prejudice or disclaimer claims 1-34. Please add new claims 35-50.

35. (New) A method for genetic analysis, comprising:

a) amplifying a non-coding region of genomic DNA to produce an amplified DNA sequence;

b) analyzing the amplified DNA sequence to identify genetic variation in the non-coding region; and

c) correlating the genetic variation with a trait conferred by allelic variation in a coding region in genetic linkage with the non-coding region.

36. (New) The method of claim 35, wherein the trait is a genetic disease.

37. (New) The method of claim 35, wherein the trait is susceptibility to a disease.

38. (New) The method of claim 36, wherein the disease is monogenic.

39. (New) The method of claim 36, wherein the disease is multigenic.

40. (New) The method of claim 35, wherein the analyzing comprises hybridizing the amplified DNA sequence to an oligonucleotide.

41. (New) The method of claim 35, wherein the amplified DNA sequence is labeled.

42. (New) The method of claim 40, wherein the oligonucleotide is a sequence-specific oligonucleotide.

43. (New) The method of claim 40, wherein the amplified DNA sequence is hybridized with a plurality of oligonucleotides.

44. (New) The method of claim 35, wherein the genetic variation comprises a plurality of polymorphisms.

45. (New) The method of claim 44, wherein the plurality of polymorphisms comprise single base polymorphisms.

46. (New) The method of claim 35, wherein the non-coding region is remote from the coding region.

47. (New) The method of claim 46, wherein the method is performed on a plurality of non-coding regions from a selected chromosome region in different individuals.

48. (New) The method of claim 47, wherein (a) and (b) of the method are repeated for a plurality of non-coding regions from a second selected chromosome region from the different individuals.

49. (New) The method of claim 35, wherein the non-coding region is an intron sequence.

50. (New) The method of claim 35, wherein the non-coding region is a regulatory region.